

**REMARKS**

This Application has been carefully reviewed in light of the final Office Action mailed October 17, 2003 ("Office Action"). Applicants respectfully request reconsideration and favorable action in this case.

**Section 103 Rejections**

Claims 79-83, 86-91 and 94-96 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,756,367 to Puri et al. ("*Puri*") in view of U.S. Patent No. 5,785,133 to Murray et al. ("*Murray*"). Claims 84, 85, 92, 93, 97 and 98 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Puri* and *Murray* as applied to Claims 79 or 87 and further in view of U.S. Patent No. 4,527,639 to Dickinson, III et al. ("*Dickinson*"). Applicants traverse these rejections, as well as any findings and assertions thereof.

The Examiner has not met his burden of establishing a *prima facie* case of obviousness in making these rejections. According to M.P.E.P. §2143, to establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation to combine the references. Second, there must be a reasonable expectation of success. Third, the prior art combination of references must teach or suggest all the claim limitations. Applicant notes that the Examiner has failed to satisfy at least two of the elements of non-obviousness, which are required to support a proper §103 analysis.

With respect to the first criteria of non-obviousness, the Examiner has not shown a suggestion or a motivation in the references or in the knowledge generally available to one of ordinary skill in the art to combine the cited references. According to the Examiner, *Puri* teaches simultaneously recovering water and gas from a coal seam and *Murray* teaches a drilling pattern including auxiliary bores. Office Action, Page 3. The Examiner states that "It would have been obvious to one skill[ed] in the art at the time of the invention to have used a pattern as taught by Murray, including auxiliary bores arranged in substantially equal parallel spacing on opposite sides of the axis of the pattern with the step of simultaneously removing water and gas from the coal seam taught by Puri ... in order to achieve uniform coverage of a subterranean area from a single surface well." Office Action, Page 3. However, the Examiner does not show that the advantages of combining the references are disclosed, taught, or suggested in *Puri* or *Murray* or

any other reference or in the knowledge that was generally available to those of ordinary skill in the art at the time of the invention.

In order to modify a reference in an effort to produce the claimed invention, there must be some suggestion or motivation for such modification found in the reference itself or in the knowledge generally available to one of ordinary skill in the art at the time of the invention. M.P.E.P. § 2143.01. Further, in establishing a *prima facie* case of obviousness, it is incumbent upon the Examiner to provide evidence supporting why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). The mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990); M.P.E.P. § 2143.01.

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Here, the Examiner has not cited any language in *Puri* or *Murray* or within information commonly known to those skilled in the art that provides the necessary motivation or suggestion to combine the references. Rather, the Examiner merely asserts that the combination would have been obvious "to achieve uniform coverage of a subterranean area from a single surface well." Final Office Action, page 3. However, nowhere does *Puri* disclose, teach, or suggest a need for uniform coverage of a subterranean area from a single surface well. In fact, *Puri* teaches a "five-spot" well pattern penetrating a coal seam for reinjecting produced gas to maintain a high relative permeability to gas in coal cleats adjacent to the producing well during low-demand periods. Col. 3, Lines 17-29. Thus, *Puri* requires multiple wells penetrating the coal seam such that one or more of the wells may be used as an injection well while the remaining wells continue as production wells. Nothing in *Puri* motivates or suggests the need for achieving uniform coverage of a subterranean area from a single surface well, as allegedly disclosed by *Murray*.

Furthermore, this application has over two hundred cited references and the Examiner has been unable to cite any passage that teaches or suggests using horizontal drainage patterns in coal seams to produce methane as claimed. Thus, supporting the fact that the use of a horizontal drainage pattern, such as disclosed in *Murray*, in coal was not obvious at the time of the invention. Additionally, non-obviousness is further supported by the textbook "Coalbed Methane: Principles & Practices," by Rudy Rogers. In this text which is dedicated to the discussion of coalbed methane production, there is no discussion of using horizontal drainage

patterns in coal seams to produce methane as claimed. Instead, Rogers, for example, merely discloses using vertical wells in a 320 acre 5-spot pattern to produce methane from a coalbed. Rogers, Pages 191-92. Thus, Applicants submit that this omission from the cited references, including Roger's text, suggest that using horizontal wells in coalbeds as claimed is "contrary to accepted wisdom," further demonstrating non-obviousness. See MPEP § 2145(X)(D)(3). Thus, the suggestion or motivation required by M.P.E.P. § 2143.01 for the proposed combination of *Puri* and *Murray* does not exist, and the Examiner has failed to identify the source of such suggestion or motivation.

Furthermore, in failing to specifically identify specific teachings in the cited references that would suggest or motivate one of skill in the art at the time of invention to combine *Puri* and *Murray*, the Examiner has used hindsight to look at the system claimed and then conclude that it would be obvious to combine the drilling pattern of *Murray* with the teachings of *Puri*.

Measuring a claimed invention against the standard established by Section 103 requires the difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See, e.g., *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 220 USPQ 303, 313 (Fed. Cir. 1983).

In *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999), the Federal Circuit explained that evidence of a suggestion, teaching, or motivation is essential to avoid impermissible hindsight reconstruction of an applicant's invention:

Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight obviousness analysis is *rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references*. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight. *Id.* at 999 (emphasis added).

It is for this reason that the Examiner must specifically identify the reasons one of ordinary skill in the art would have been motivated to select the references and combine them. The Examiner can satisfy the burden of obviousness in light of a combination "only by showing some objective teaching [leading to the combination]." See, e.g., *In re Fine*, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). Although evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the

art, or, in some cases, from the nature of the problem to be solved, the range of sources available does not diminish the requirement for actual evidence. Broad conclusory statements by the Examiner regarding the teaching of multiple references, standing alone, are not "evidence." *In re Dembiczak*, 175 F.3d at 999. Here, the broad conclusory statement of the Examiner that the combination would have been obvious "to achieve uniform coverage of a subterranean area from a single surface well" as allegedly taught by *Murray* is not "evidence." Applicants respectfully submits that the Examiner has not provided the required evidence of a suggestion, teaching, or motivation to combine *Puri* with *Murray*. Without this evidence, the Examiner's rejections amount to no more than the impermissible hindsight reconstruction of Applicant's invention.

With respect to the second criterion of non-obviousness, the Examiner has also failed to show a reasonable expectation of success for the proposed combinations. There is no showing by the Examiner that the teachings of *Murray* would be able to produce methane in a coalbed and be capable of storing reinjected methane as disclosed in *Puri*. The proposed combination (presumptively) attempts to combine divergent subject matter that has not been shown to be capable of operating according to any degree of predictability. The Examiner, without resorting to improper hindsight to look through the claimed invention, has not addressed the chance that the proposed *Puri-Murray* combination would have any success whatsoever: let alone a reasonable expectation of success as is required. Therefore, Applicant respectfully submits that the Examiner has failed to establish the second criteria for a prima facie case of obviousness.

With respect to the third criterion of non-obviousness, the Examiner has not shown how the proposed combination teaches each and every limitation of the claimed invention. Claim 79 is patentable over the combination of *Puri* and *Murray* because the combination is improper and further because the references do not, even when combined, teach all elements of Claim 79. *Puri* and *Murray*, even if combined, do not teach all elements of Claim 79. Even if the pattern of *Murray* is substantially uniform, which Applicants do not here address, it does not necessarily follow that water and coal seam gas are "substantially uniformly" removed from the selected area of the coal seam as recited by Claim 79. Moreover, *Puri*, which teaches a pattern of producing and injecting wells, would seem to teach, if anything, non-uniform removal with a pressure distribution between the producing and injecting wells. Thus, substantially uniformly removing water and coal seam gas is not taught or inherent from the pattern of *Murray* or wells of *Puri*. For this reason, Claim 79 is patentable over the cited art.

Claims 80-86 and 97 are allowable as depending from an allowable base claim and adding further elements that further distinguish the cited art. For example, in regard to Claim 84 and 97, it is unclear how the teaching of *Dickinson* would facilitate the drilling of laterals of *Murray*. In regard to Claim 86, there is no teaching or suggestion in the art of progressively shorter auxiliary drainage bores. Accordingly, Applicants request full allowance of Claims 79-86.

Claim 87 is allowable for reasons analogous to that discussed in connection with Claim 79 above. Claims 88-96 and 98 depend from Claim 87 and are allowable as depending from an allowable base claim and including further elements that further distinguish the art. Accordingly, Applicants request the full allowance of Claims 87-96.

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**CONCLUSION**

Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all the pending claims.

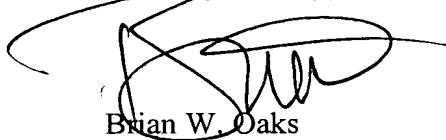
If the present application is not allowed and/or if one or more of the rejections is maintained, Applicants hereby request a telephone conference with the Examiner and further request that the Examiner contact the undersigned attorney to schedule the telephone conference.

A check in the amount of \$110.00 is enclosed to cover the cost of a one-month extension of time. Although Applicants believe no other fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

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Respectfully submitted,

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